

Claims

1. A molded glass article manufacturing device, equipped with an upper mold and a lower mold capable of separating from, and approaching, each other and having opposing forming surfaces, wherein said upper mold and said lower mold separate from each other in the course of supplying a glass material to the forming surface of said lower mold and in the course of removing the molded glass article from the forming surface of said lower mold; characterized by comprising:

a drum capable of regulating said upper mold and said lower mold so that the displacement axes thereof align;

a forced mold separating means separating said molded glass article adhered to a forming surface from the mold by contact with at least the rim portion of said molded glass object; and

a displacement means for displacing said forced mold separating means relative to said upper mold or said lower mold so that, in the course of separation of said upper mold and said lower mold, said forced mold separating means contacts at least the rim portion of said molded glass article and separates said molded glass article from the forming surface.

2. The device of claim 1 wherein said forced mold separating means separates said molded glass article adhered to said upper forming surface from the upper mold forming surface by contacting at least a portion of the rim of said molded glass article.

3. The device of claim 2 wherein said forced mold separating means is configured so as to be directly or indirectly pushed upward by the lower mold as said upper mold and said lower mold approach each other, and not in a state of contact with said molded glass article.

4. The device of claim 2 wherein the clearance between the portion of said forced mold separating means coming into contact with said molded glass article and the outer perimeter portion of said forming surface of said upper mold is set so that said contact portion contacts said molded glass article in proximity to the outermost rim portion thereof.

5. The device of claim 2 wherein said displacement means is an energizing means storing an energizing force by compression when said forced mold separating means is directly or indirectly pressed upward by said lower mold.

6. The device of claim 5 wherein said energizing means causes said forced mold separating means to follow the lower mold during separation of said upper mold and said lower mold.

7. The device of claim 2 wherein said forced mold separating means is cylindrical and is externally inserted onto said upper mold so as to contact at least a portion of the rim of said molded glass article adhered to the upper mold forming surface.

8. The device of claim 1 wherein said drum controls vertical movement of said forced mold separating means.

9. The device of claim 1 wherein said forced mold separating means causes said molded glass article adhered to the lower mold forming surface to separate from said lower mold forming surface by contacting at least a portion of the rim portion of said molded glass article.

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15. The device of claim 9 wherein said drum regulates vertical movement of said forced mold separating means.

5 the device of claim 1 is employed;

the rim portion of said molded glass article and a portion of the forced mold separating means come into contact during the step of separation from the mold and said upper mold and said forced mold separating means are displaced relative to each other so that said molded glass article adhered to said upper mold forming surface is separated from the upper mold forming surface to separate said molded glass article adhered to said upper mold forming surface from the mold.

the device described in claim 1 is employed;

the rim portion of said molded glass article and a portion of the forced mold separating means come into contact during the step of separation from the mold and said lower mold and said forced mold separating means are displaced
25 relative to each other so that said molded glass article adhered to said lower mold

forming surface is separated from the lower mold forming surface to separate said molded glass article adhered to said lower mold forming surface from the mold.

18. The manufacturing method of claim 16 wherein said upper mold is moved so as to be able to follow volumetric change of said molded glass article caused by thermal contraction in said cooling step.

19. A method of assembling a molded glass article manufacturing device equipped with an upper mold and a lower mold capable of separating from, and approaching, each other, said upper mold being secured to an upper main shaft, said lower mold being secured to a lower main shaft, and said upper mold and said lower mold having opposing forming surfaces;

characterized in that said upper mold is directly or indirectly secured to said upper main shaft and said lower mold is likewise secured to said lower main shaft so as to be held in a centering holder in such a manner that the displacement axes of said upper mold and said lower mold are aligned.

20. The method of claim 19 wherein said molded glass article manufacturing device is equipped with an upper mold and a lower mold capable of separating from, and approaching, each other and having opposing forming surfaces, said upper mold and said lower mold separate from each other in the course of supplying a glass material to the forming surface of said lower mold and in the course of removing the molded glass article from the forming surface of said lower mold; said molded glass article manufacturing device further comprising:

a forced mold separating means separating said molded glass article adhered to a forming surface from the mold by contact with at least the rim portion of said molded glass object; and

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